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Brief article

Gender and treatment response in substance use treatment-mandated parolees

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Abstract

Well-controlled, randomized studies of correctional interventions examining gender effects are rare. This study examined gender main effects and gender × treatment interactions in a multisite randomized trial ($N = 431$) comparing a new form of correctional supervision for drug-involved offenders (collaborative behavioral management [CBM]) to standard parole. Outcomes included repeated measures of yes/no use of primary drug, alcohol use, and recidivism during 9 months postrelease. Generalized estimating equation analyses indicated that despite using harder drugs at baseline, women were less likely than men to use their primary drug and to use alcohol during the follow-up period. No gender-related differences in recidivism were found. Treatment interacted with gender to predict alcohol use, with women in CBM reporting the best alcohol outcomes (only 5% of women used alcohol during the follow-up period). The clear expectations, positive reinforcement, recognition of successes, fairness, and support present in CBM may be particularly important for women parolees.

Keywords: Gender; Parole; Criminal justice; Drug use treatment

The United States has the highest per capita incarceration rate of any developed country, with 2.3 million people incarcerated in the United States at year-end 2007 (Mauer, 2003). Because 68% of offenders have substance abuse or dependence in the year prior to incarceration (Karberg & James, 2005) and more than 700,000 offenders leave state and federal prisons each year (West, Sabol, & Cooper, 2009), the transition of drug-involved offenders from incarceration to the community is a critical issue for public health and public safety.

Addiction treatment during the transition from incarceration back to the community can reduce substance use and criminal behavior (Inciardi, Martin, Butzin, Hooper, & Harrison, 1997), but newly released offenders may have limited motivation for treatment (Sung, Belenko, & Feng, 2001). As a result, innovations over the last two decades have sought closer coordination of community correctional supervision with addiction treatment (Taxman & Thanner, 2006). Unfortunately, drug-involved parolees often reenter the community with multiple behavioral expectations (e.g., conditions of parole) that are often unclear, unrealistic, or discrepant between parole and addiction treatment. Punishment is uneven, "blunt," arbitrary, and frequently experienced by clients as "unfair." Parole officers (POs) have few tools to reinforce prosocial behavior, relying instead on negative sanctions as the only tool. The current system is thus suboptimal for facilitating lasting behavioral change in drug-involved offenders; many (35%) return to custody within 12 months of release (Messina, Burdon, Hagopian, &

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Prendergast, 2006), often as a result of violations of supervision requirements, such as failure to attend treatment or detected substance use (Langan, & Levin, 2002).

The Step'n Out Study (Friedmann et al., 2008; Friedmann, Rhodes, Taxman, 2009) was a multisite randomized trial evaluating a model of correctional supervision (collaborative behavioral management [CBM]) involving a PO and treatment counselor teams to facilitate the integration of parole and treatment services to optimize rehabilitative outcomes for drug-involved offenders (Center for Substance Abuse Treatment [CSAT], 1994; Marlowe, 2003). In addition to combining the leverage of the criminal justice system with substance use treatment, CBM works to improve the integration, clarity, and expeditiousness of both positive and negative reinforcers for desired behavior.

Research indicates that in addition to the clarity and consistency of the transitional system serving drug-using incarcerated populations, gender may also be an important factor in community transition efforts for at least two reasons. First, drug-involved women and men differ when they enter prison. For example, large studies (Langan & Pelissier, 2001; Messina, Burdon, & Prendergast, 2003) have found that compared with men in prison substance use treatment, women in prison substance use treatment used drugs more frequently, used harder drugs, and used them for different reasons (pain alleviation vs. euphoria) than men. Women also confronted more difficulties than men in areas linked to substance abuse, such as lower levels of education, poorer vocational skills, higher levels of depression and other co-occurring disorders, more suicidality, and physical problems (Adams, Leukefeld, & Peden, 2008; Messina et al., 2003, 2006; Pelissier, Camp, Gaes, Saylor, & Rhodes, 2003; Zlotnick et al., 2008). Women (compared with men) were much more likely to have drug use in the family of origin, to experience physical or sexual abuse as a child, to have a close friend with a drug problem, to have a spouse with a drug problem, to have a diagnosis of depression, and to rate their physical health unfavorably (Langan & Pelissier, 2001; Messina et al., 2003, 2006; Pelissier et al., 2003). However, women offenders are less likely to have a prior criminal record, and their prior records are less serious than those of men (Messina et al., 2006; Pelissier et al., 2003).

Second, although both men and women face stigma and difficulties finding housing and employment as they leave prison, women leaving prison confront more stigma and discrimination, have fewer vocational skills, and experience bleaker employment prospects, in addition to being more likely to live with minor children as they are released (Langan, & Pelissier, 2001), all of which can affect reentry. Responsibilities with children, economic barriers, and higher rates of co-occurring disorders may be gender-linked barriers to prison aftercare for women (Greenfield et al., 2007).

A recent review of the literature of gender differences in (noncorrectional) substance use treatment (Greenfield et al., 2007) concluded that much of the available information on gender differences is derived from cross-sectional, descriptive, quasi-experimental, and observational studies and that the field is in the very earliest stage of establishing a base of valid and reliable information on gender and substance use treatment outcomes. As a result, several recent reviews (Greenfield et al., 2007; Plant, 2008; Walitzer & Dearing, 2006) have called for additional research on gender differences in response to substance use treatment. The need for studies on the effects of gender on treatment outcomes is even more profound for substance-using correctional populations because there are fewer randomized controlled studies in corrections overall and because most studies of criminal justice-involved substance users have primarily or exclusively included men. This situation is problematic because practice standards have called for gender-sensitive treatment (Substance Abuse and Mental Health Services Administration [SAMHSA], 1999), but the outcomes literature supporting gender-sensitive treatments in corrections is sparse (Dolan, Kolthoff, Schreck, Smilanich, & Todd, 2003; Veysey, 2008). Observational studies comparing outcomes of men and women in similar treatments (Messina et al., 2006; Pelissier et al., 2003) and randomized studies comparing outcomes of women in different treatments (Messina, Grella, Cartier, & Torres, 2010) are beginning to be conducted, but randomized studies comparing outcomes of men and women across different treatments are still rare. These studies are needed to determine whether helpful treatment components differ for men and women.

The purpose of this study is to examine gender differences in response to two interventions for drug-involved offenders during the critical period of community reentry. Specifically, we examine differential alcohol, primary drug, and reincarceration outcomes at 9 months postrelease for CBM versus standard parole for men and women in the Step'n Out treatment study.

1. Method

1.1. Study design

Step'n Out was a six-site randomized clinical trial to evaluate whether implementing CBM among PO and treatment counselor teams might improve the 3- and 9-month outcomes of parolees, compared to standard parole (Friedmann et al., 2008, 2009). The six sites that were chosen by research centers associated with the National Institute of Drug Abuse (NIDA)-funded Criminal Justice Drug Abuse Treatment Studies collaborative; recruitment at these sites took place from March 2005 to June 2008. The protocol was approved by institutional review boards at each institution and complied with the special protections pertaining to behavioral research involving prisoners (Office of Human Research Protections [OHRP], 2005). Following completion of screening, informed consent, and a baseline interview, subjects were randomized to the CBM intervention or to standard parole. Urn randomization (Stout, Wirtz, Carbonari, & Del Boca, 1994) ensured balance by gender,

receipt of in-prison or transitional residential addiction treatment, length of incarceration more or less than 18 months, and moderate versus high risk for recidivism on the Lifestyle Criminality Screening Form (LCSF; Walters & McDonough, 1998).

1.2. Participants

The target population was parolees with preincarceration substance use disorders who were at moderate to high risk of recidivism. Inclusion criteria were the following: (a) at least 18 years of age; (b) English speaking; (c) probable drug dependence immediately prior to incarceration as determined by a score of 3 or higher on the TCU Drug Screen II (Knight, Simpson, & Hiller, 2002) or mandated drug treatment; (d) substance use treatment as a mandated or recommended condition of parole; (e) moderate to high risk of drug use relapse and/or recidivism as determined by a LCSF score of 7 or greater (Walters & McDonough, 1998) or by a history of two or more prior episodes of drug abuse treatment or drug-related convictions. Exclusion criteria were (a) psychotic symptoms on a Structured Clinical Interview for *DSM-IV* screener (First, 2002) and (b) correctional or supervision conditions that prohibited participation in the study, including failure to leave prison on parole or probation, mandate to a special parole caseload, or transfer to a nonparticipating supervision office.

Eligible parolees ($N = 476$) were randomized to CBM or to standard parole and attended their first parole session. The current analysis includes participants (90%) who completed the Timeline Followback (TLFB) at the 3-month postparole initiation assessment ($N = 431$, 354 men and 77 women). Follow-up data from Months 4–9 was also available for 410 participants (95% of our sample).

1.3. Interventions

1.3.1. Standard parole

Participants in the control condition received standard parole supervision with traditional sanctions from a different officer at the usual office. Standard parole included, at minimum, face-to-face contacts and drug testing (random, observed). Typical parole supervision involves week to monthly in-person contacts between the offender and PO to improve compliance with conditions of release (e.g., treatment attendance and drug abstinence). In this study, average contacts between parolees and the PO ranged from 1 to 4 per month, as did frequency of required urine tests; all POs had an affiliation with an outpatient substance abuse treatment program, the type of treatment offered was cognitive–behavioral in four sites and limited to alcohol and drug education in two sites.

1.3.2. Collaborative Behavioral Management

The CBM treatment was based on the idea that sustained positive change is more likely to follow reinforcement of desired behavior than punishment of undesired behavior. In CBM, efforts were made to change the punitive dynamic of parole interventions by giving POs positive tools to shape behavior in a prosocial direction through the definition and reinforcement of incremental steps toward rehabilitation. Thus, operant conditioning and procedural justice theory, which maintains that individuals are more likely to comply with rules perceived as fair and equally applied (Tyler, 1990), provide the basis for CBM. In addition, CBM provides mechanisms for POs and substance abuse treatment providers to collaborate more closely in reinforcing behavior than does standard parole.

The 12-week CBM intervention involves an initial session between the PO, substance use counselor, and offender, followed by weekly contacts between the PO and offender; the treatment counselor joins these sessions at least once every other week. The CBM has four major elements (Friedmann et al., 2008). First, it explicitly articulates the roles of both staff and offenders, their expectations of one another, and the consequences if offenders meet or fail to meet those expectations. Second, it negotiates a behavioral contract that specifies concrete target behaviors in which the offender is expected to engage on a weekly basis. These target behaviors include requirements of supervision and formal addiction treatment and involvement in behaviors that compete with drug use (e.g., getting a job, enhancing nondrug social network). Third, it regularly monitors adherence to the weekly behavioral contract and administers both reinforcers and sanctions to shape behavior. Fourth, CBM establishes a systematic, standardized, and progressive approach to reinforcement and sanctioning to ensure consistency and fairness.

1.3.3. Intervention providers

Intervention providers consisted of teams of POs and substance use counselors at each of the six sites. The providers for the CBM condition received 2.5 days of training in this approach; providers for the standard parole condition received no special training.

1.3.4. Intervention fidelity

Procedures to ensure fidelity of the CBM intervention included the preparation of a standard manual for the CBM approach, an initial uniform training of the CBM intervention teams, a booster training after a year of implementation, and study-wide procedures for monitoring delivery of the CBM intervention. The mean number of sessions attended for the CBM group was 8.7 ($SD = 3.2$), with more than 95% of CBM participants attending at least three sessions. Adherence to the CBM protocol was high: overall, 82% of sessions coded (84% of the induction sessions, 78% of the 1-month sessions) met criteria for fidelity (Friedmann et al., 2008).

1.4. Assessments and analyses

Personal interviews performed at baseline (prerandomization), at 3 months, and at 9 months after the initial parole

session used the Criminal Justice Drug Abuse Treatment Studies (CJ-DATS) Intake and Follow-up instruments (CJ-DATS, 2004). The intake gathered baseline characteristics on the subject prior to the arrest that led to the most recent incarceration, whereas the 3- and 9-month follow-up forms captured information for Months 1–9 after the initial parole session. Baseline measures evaluated frequency of drug and alcohol use (on a scale from 0 = *never* to 9 = *four times or more per day*) and number of days incarcerated in the 6 months prior to the index incarceration. A Timeline Followback (TLFB) calendar interview (Ehrman & Robbins, 1994; Miller, 1996; Sobell & Sobell, 1992) assessed substance use, arrests, and reincarceration on a daily basis during the follow-up period. Standardized procedures tracked subjects for follow-up interviews (Hall et al., 2003).

We used generalized estimating equation (GEE) analysis to predict yes/no use of primary drug and alcohol and prison recidivism monthly for the 9 months after prison release. Monthly dichotomous variables were created using the daily substance use and incarceration information from the TLFB. GEE analysis allowed us to include all available data, rather than use listwise exclusion of participants with any monthly data missing. Participants had an average of 8.2 months of data available. An independent correlation structure provided the best fit to the data. Self-reports of drug use at the 3- and 9-month interviews were cross-checked against urine drug screens, which tested for cocaine, amphetamines, methamphetamine, tetrahydrocannabinol (THC), opiates, and benzodiazepines. Moderate agreement (κ = 0.38) between drug use derived by self-report and by substance-positive urine screens (n = 292, lower due to no urine collected, refusal, or incarceration) was found.

Separate analyses for each dependent variable (monthly alcohol use, primary drug use, or incarceration) included intervention condition, sex, and the intervention × sex interaction. The log of days in the community for each month was used as a covariate in the alcohol and drug analyses. Days using or incarcerated in the 6 months prior to the index incarceration, time, and site were also predictors in each model. Condition and gender were centered (+1/2, −1/2); analyses were run in SAS PROC GENMOD.

2. Results

Within the full sample of 476, there were no significant differences in gender, marital status, years of education, preprison frequency of alcohol use, or preprison frequency of use of a variety of drugs between participants who completed the 3-month TLFB assessment (and were included in the current study) and those who did not. However, included participants were slightly younger, spent fewer days in jail in the 6 months prior to the index incarceration, and were more likely to be of minority status.

In the current sample of 431, 39 women and 182 men received CBM, and 38 women and 172 men were assigned to standard parole. As has been found in previous studies, relative to men in our sample, women in our sample were less likely to live with a spouse or partner but more likely to live with children prior to incarceration, less likely to be employed prior to incarceration, had less serious lifetime

Table 1
Sample characteristics at baseline by gender

	Men (n = 354)	Women (n = 77)	Total (N = 431)
Characteristics	% *M* (*SD*)	% *M* (*SD*)	% *M* (*SD*)
Age	34.2 (8.6)	35.6 (8.5)	34.4 (8.6)
Hispanic ethnicity	16	9	15
Race			
White	32	34	33
Black	50	56	51
Other	18	10	16
Family composition			
Legally single	70	66	70
Lived with spouse or partner	46 *	32	44
Has children	70	82 *	72
Lived with children prior to incarceration	26	40 *	29
High school graduate	31	33	31
Employed prior to incarceration	51 *	33	47
Primary drug category (self-report)			
Heroin and other opioids	34	42	36
Stimulants (cocaine, methamphetamine)	20	31 *	22
Marijuana	30 *	14	27
Other	9	6	8
Lifetime arrests	13.7 (20.8) **	6.6 (5.2)	12.5 (19.2)
Age at first arrest	16.6 (4.8)	22.2 (8.1) **	17.6 (5.9)
Lifetime months incarcerated	76.2 (66.3) **	40.0 (45.3)	69.9 (64.6)
Age at first incarceration	18.1 (6.2)	22.7 (8.0) **	18.9 (6.8)
Mental health/ victimization (self-report)			
Lifetime depression	23	35 *	25
Lifetime anxiety/stress	22	30	23
Lifetime suicide attempts	6	12	7
Physically/sexually/ emotionally abused in 6 months prior to incarceration	10	16	11
Network substance use in 6 months prior to incarceration			
Got drunk with partner	62	70	63
Used drugs with partner	54	76 **	58
Got drunk with parents	47	61 *	50
Used drugs with parents	22	41 **	26

* Gender difference significant at $p < .05$ using chi-square or Mann–Whitney analyses.

** Gender difference significant at $p \leq .001$ using chi-square or Mann–Whitney analyses.

arrest and incarceration histories, were more likely to self-report lifetime depression, and had more substance use in their close networks (i.e., partners or parents; Table 1).

2.1. Preprison gender differences in primary outcomes

Because the sample was selected for drug use, men and women who identified a primary drug were equally likely to report use of their primary drug in the 6 months prior to the index incarceration (82% for both genders; $\chi^2 = .01$, $df = 1$, $p = 1.00$) and reported similar frequency of primary drug use during this time (Mann–Whitney $U = 10{,}869.5$, $Z = -1.02$, $p = .31$). However, men and women differed on categories of primary drug ($\chi^2 = 10.55$, $df = 4$, $p = .03$); women were more likely than men to report stimulants (primarily cocaine) as their primary drug; men were more likely than women to have marijuana as a primary drug (see Table 1). Men and women also differed on rates of alcohol use: men were significantly more likely to use alcohol in the 6 months prior to their index incarceration ($\chi^2 = 14.66$, $df = 1$, $p < .001$), with 63% of men versus 39% of women reporting alcohol use during that time. However, among those who used alcohol, men and women used it with similar frequency (Mann–Whitney $U = 3{,}061.0$, $Z = -0.80$, $p = .42$). Men and women had similar number of days incarcerated in the 6 months prior to the index incarceration (Mann–Whitney $U = 12{,}342.5$, $Z = -0.79$, $p = .43$); 27% of men and 22% of women were incarcerated for at least 1 day during that time.

2.2. Gender differences in intervention outcome

2.2.1. Primary drug use

Despite reporting "harder" primary drugs, women were less likely than men to use their primary drug at each month postrelease (the gender main effect on use of primary drug was significant; see Table 2). Gender differences in postprison primary drug use could not be explained by preprison differences in frequency of drug use because regression analyses controlled for preprison frequency of primary drug use. Furthermore, even though men and women reported similar frequency of preprison primary drug use, we reran the analysis controlling for primary drug category to ensure that the gender difference in likelihood of postprison drug use was not attributable to gender differences in primary drug categories at baseline. Results indicated that those whose primary drug was a stimulant were less likely to use their primary drug during the follow-up period ($B = -2.46$, $SE = 0.51$, $p < .001$), and those whose primary drug was an opiate tended toward more use it during the follow-up period ($B = 0.61$, $SE = 0.31$, $p = .05$) than those who had marijuana as a primary drug. However, differences in primary drug of abuse did not account for gender differences in likelihood of primary drug use after release; the gender effect was still significant ($B = -1.62$, $SE = 0.42$, $p < .001$).

The interaction between intervention and gender was not significant in predicting primary drug use, meaning that the comparative effectiveness of the two interventions on use of primary drug did not differ for men and women. For men, 27% of control participants and 21% of CBM participants used their primary drug at any time during the 9 months postrelease. For women, 17% of the control participants and 11% of the CBM participants used their primary drug during this time (see Fig. 1).

Table 2
Results of GEE analyses predicting monthly yes/no alcohol use, primary drug use, and prison recidivism during Months 1–9 postrelease

Variable	*B*	*SE* (*B*)	*Z*
Yes/No use of primary drug ($n = 398$ [a])			
CBM intervention [b]	−0.55	0.39	−1.42
Female [c]	−1.64	0.41	−3.97**
Female * CBM intervention	−0.55	0.78	−0.70
Yes/No alcohol use ($n = 430$)			
CBM intervention [b]	−1.71	0.40	−4.25**
Female [c]	−2.09	0.41	−5.12**
Female * CBM intervention	−2.82	0.81	−3.50**
Yes/No recidivism ($n = 416$)			
CBM intervention [b]	−0.10	0.31	−0.34
Female [c]	−0.45	0.31	−1.44
Female * CBM intervention	−0.31	0.61	−0.50

Note. Analyses controlled for time, baseline days using or incarcerated, and site. Drug and alcohol analyses also controlled for the log of days in the community each month.

[a] Participants without a primary drug at baseline were not included in this analysis.

[b] CBM = +1/2, standard parole = −1/2.

[c] Female = +1/2, male = −1/2.

* $p < .05$.

** $p < .001$.

2.2.2. Alcohol use

Even after controlling for differences in baseline frequency of alcohol use, female gender also predicted reduced likelihood of alcohol use at each month postrelease (Table 2). Furthermore, the interaction between gender and intervention was also significant, with CBM resulting in a larger reduction in likelihood of alcohol use for women than for men (Fig. 2). For men, 47% of the control participants and 39% of the CBM participants used alcohol at any time during the 9 months postrelease. For women, 29% of the control participants and only 5% of the CBM participants used alcohol during this time.

2.2.3. Reincarceration

There was no gender difference in monthly likelihood of being reincarcerated during the 9 months after release from prison (Table 2). CBM did not significantly reduce reincarceration risk more for either gender, although Fig. 3 seems to indicate a slight trend toward CBM having greater effects for women. For men, 36% of the control participants and 34% of the CBM participants were reincarcerated during the 9-month follow-up. For women, 29% of the control participants and 21% of the CBM participants were reincarcerated during follow-up.

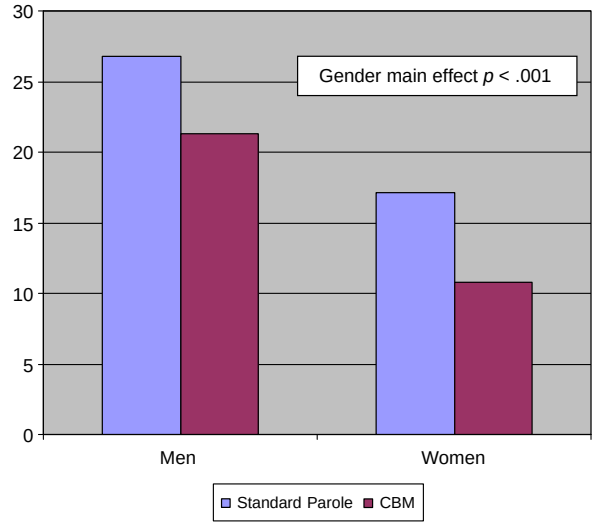

Fig. 1. Percent reporting any primary drug use during the 9-month follow-up.

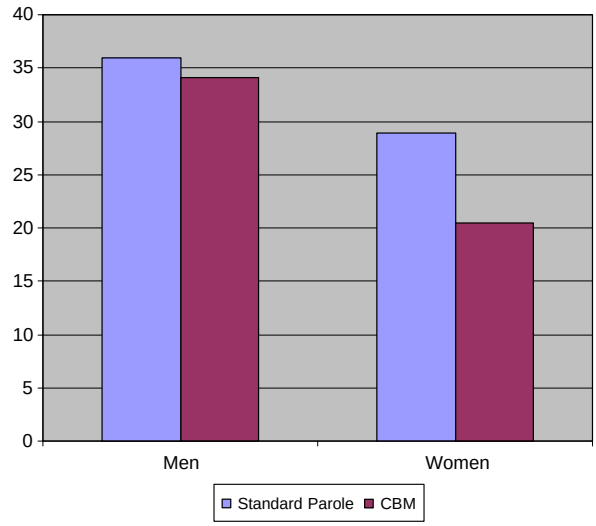

Fig. 3. Percent reincarcerated during the 9-month follow-up.

3. Discussion

In this study, female gender predicted reduced monthly likelihood of both primary drug and alcohol use in the 9 months after incarceration, even after controlling for baseline frequency of use of primary drug or alcohol. Lower postprison rates of drug use for women than for men are notable given that women were more likely than men to report use of "hard" drugs (cocaine or other stimulants) prior to prison. When primary drug category was controlled, gender was still a strong predictor of reduced likelihood of drug use in the 9 months after release from prison.

These findings in a sample of parolees are consistent with past findings in samples of prisoners, which have indicated that women in prison substance use treatment have lower drug use rates than men in the months after being released from prison (Pelissier et al., 2003), despite having more severe and more frequent preprison drug use, more co-occurring mental health problems, more medical problems, higher rates of physical and sexual victimization, lower levels of education, less social support, and poorer vocational prospects than do men, in addition to being more likely than men to return to full responsibility for children (Langan, & Pelissier, 2001). In summarizing research on noncorrectional substance use treatment, Fiorentine, Anglin, Gil-Rivas, and Taylor (1997) have proposed the "gender paradox," which refers to the fact that women in drug treatment tend to fare at least as well as do men in terms of drug use outcomes despite higher levels of many risk factors and more psychosocial impairment at treatment entry (Greenfield et al., 2007). This gender effect appears accentuated in criminal justice populations, where female drug users clearly and consistently have more impairment but better postprison drug use outcomes than do males. Two large studies (Messina et al., 2006; Pelissier et al., 2003) also found that factors predicting aftercare treatment completion, posttreatment drug use, and recidivism were slightly different for women than for men, suggesting the possibility of gender-specific pathways to successful community reentry.

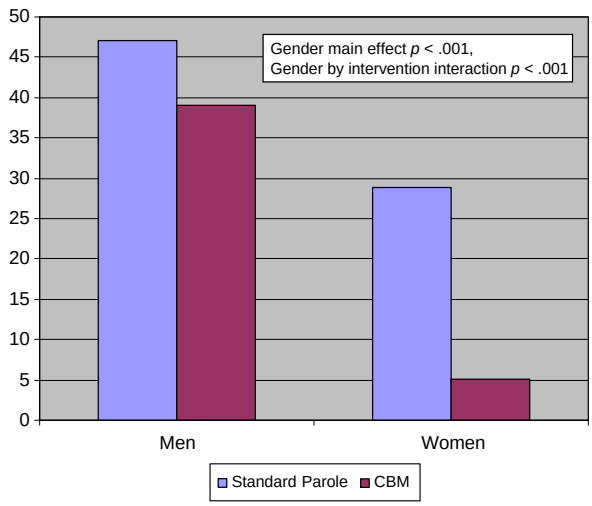

Fig. 2. Percent reporting any alcohol use during the 9-month follow-up.

Our findings also support the possibility of gender-specific processes at community reentry. In addition to gender main effects in this study, a gender × intervention interaction was found in predicting likelihood of post-release alcohol use. CBM reduced alcohol use rates slightly (from 47% to 39%) for men but dramatically (29% to 5%) for women. In this study, a collaborative, positive, consistent system of integrated parole and treatment services provided more treatment advantages for women than men in terms of alcohol use during the 9 months postrelease. Interaction effects were not found for all outcomes assessed, but where treatment effects were

strongest, treatment interacted with gender to produce better treatment gains for women than for men. This finding is important because (a) it lends some support to the idea that optimal transitional treatments may differ for men and women; (b) it is unusual to find gender × intervention interactions in the psychosocial treatment literature, indicating that correctional supervision may constitute a special case where gender-specific responses are found; and (c) very few large-scale randomized trials of transitional interventions for drug-involved offenders have been conducted (Taxman, 2002; Young, 2002).

The ability of CBM to reduce likelihood of alcohol use among female parolees has public health significance because alcohol use is associated with a more serious pattern of consequences for criminal justice-involved women than it is for other populations. For example, a recent study (Strong, Caviness, Anderson, Brown, & Stein, 2010) found that 83% of incarcerated women who endorsed risky drinking had gotten into a physical fight after drinking, 67% had been arrested because of drinking, 53% had been seriously injured after drinking, 49% had injured someone else after drinking, 46% had a car accident after drinking, 39% had problems parenting as a result of drinking, and 33% had an unplanned pregnancy after drinking. Furthermore, most female parolees are of child-bearing age (Hughes & Wilson, 2010), many engage in unprotected sex (Leigh, Ames, & Stacy, 2008), and approximately 7 in 10 (Greenfeld & Snell, 1999) are already mothers. Because so many female parolees may become pregnant or are already mothering, reduced alcohol use among this population may lead to reduced risk of fetal alcohol syndrome, as well as reduced risk of alcohol-related accidents, alcohol-related violence, and other risky behaviors that could negatively impact these vulnerable women and their children.

It is not clear why CBM resulted in better alcohol use outcomes for women than for men relative to standard parole, better fitting gender-specific needs of women in terms of this outcome. It is possible that women may respond better to social reinforcers, such as those emphasized in CBM. However, it is also possible that the quality of their relationships with their POs, which was a focus of CBM, is on average more important to women than it is to men. For example, an extensive qualitative study (Bloom, Owen, & Covington, 2003) found that men are less open about their needs and adopt a "get in and get out" mentality in their interactions with POs, whereas women often take more time to provide information and voice their needs. Women have higher expectations of their POs and are more likely to believe it when they are told at orientation that their PO is there to help them. Women are also more likely to develop a trusting relationship with a PO such that even if the woman is transferred, she will not sever ties with her original PO (Bloom et al., 2003). Women parolees' comparative willingness to reach out for help to professional staff may be related to having less severe criminal histories (Pelissier et al., 2003); lower levels of psychopathy (Rogers, Jordan, & Harrison, 2007); more substance use, mental health, physical, and life problems; and less support for sobriety in their close networks on average than do male parolees (Langan & Pelissier, 2001; Pelissier et al., 2003) or to other gender-based contributors to help-seeking. For example, a study of drug court participants found that females, especially those with mental health problems, had higher levels of problem recognition and desire for help than did males (Webster et al., 2006). In addition, some research suggests that strategies that reduce confrontation and provide choices for substance use clients have larger effect sizes in minority populations than in majority populations (Levensky, Kersh, Cavasos, & Brooks, 2008). A similar phenomenon might take place among women offenders, who have historically been stigmatized and disempowered and who seem to respond to someone taking the time to listen to them and take their concerns seriously (Johnson & Zlotnick, 2008). This literature might suggest that CBM's cooperative, positive, and fair but nonpunitive approach provided a safer and more engaging environment that was especially important to women.

In conclusion, the clear expectations, positive reinforcement, recognition of successes, emphasis on consistency and fairness, and focus on overall life functioning and support present in CBM (Friedmann et al., 2008, 2009) might be particularly beneficial for women parolees (Comfort, Loverro, & Kaltenbach, 2000; Nelson-Zlupko, Dore, Kauffman, & Kaltenbach, 1996; Pelissier, 2004; Pelissier et al., 2003; Ramlow, White, Watson, & Leukefeld, 1997; Welle, Falkin, & Jainchill, 1998) who experience higher levels of depression, more life problems, and higher rates of violent victimization than men (Adams et al., 2008; Johnson, 2006). Including these components in correctional supervision may result in better substance-related outcomes for the more than 1,000,000 U.S. women currently under correctional supervision (Glaze & Bonczar, 2008).

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Appendix A. Step'n Out Research Group of CJ-DATS

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